

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A device for forming an image on a screen comprising;

a coherent illumination means,

an electrically addressed spatial light modulator means located in the path of light from the coherent illumination means,

means for producing computer generated hologram images for display on the electrically addressed spatial light modulator means, and

optics to direct light diffracted by the electrically addressed spatial light modulator means to the screen,

wherein the computer generated image or images displayed by the electrically addressed spatial light modulator means result in a two dimensional image being formed at the screen.

2. (Original) A device according to claim 1 wherein the electrically addressed spatial light modulator means comprises a plurality of electrically addressed spatial light modulators.

3. (Currently Amended) A device according to ~~any one of the preceding claims~~claim 1 wherein the coherent illumination means illuminates the electrically addressed spatial light modulator means with red, green and blue light.

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4. (Original) A device according to claim 3 wherein the electrically addressed spatial light modulator means is sequentially illuminated by the coherent illumination means with red, green and blue light

5. (Original) A device according to claim 3 wherein separate portions of the electrically addressed spatial light modulator means are simultaneously illuminated by the coherent illumination means with red, green and blue light.

6. (Currently Amended) A device according to ~~any one of the preceding claims~~ claim 1 wherein the frame rate of the electrically addressed spatial light modulator means is greater than the frame rate of the two dimensional image formed at the screen.

7. (Currently Amended) A device according to claim 1 ~~any one of the preceding claims~~ in which the means for producing computer generated hologram images comprises a store of a plurality of pre-calculated computer generated holographic elements.

8. (Currently Amended) A device according to claim 1 ~~any one of the preceding claims~~ in which the means for producing computer generated hologram images is configured to produce computer generated hologram images for display on the electrically addressed spatial light modulator means that provide a regular array of pixels on the screen.

9. (Original) A device according to claim 8 wherein the array of pixels on the screen is sub-divided into blocks and the image at the screen is formed by sequentially writing one or more blocks to the screen.

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10. (Currently Amended) A device according to ~~any one of the preceding claims~~claim 1 wherein the coherent illumination means comprises at least one laser.

11. (Currently Amended) A device according to claim 1 ~~any one of the preceding claims~~ wherein additional magnification optics are provided such that a magnified two dimensional image may be formed at the screen.

12. (Original) A method of forming a two dimensional image on a screen comprising the steps of;

i) illuminating an electrically addressed spatial light modulator means with coherent light,

ii) displaying a computer generated hologram image on the electrically addressed spatial light modulator means so as to diffract light therefrom, and

iii) using optics to direct light diffracted by the electrically addressed spatial light modulator means to a screen,

whereby the electrically addressed spatial light modulator means is arranged to display an image or images that produce a two dimensional image at the screen.

13. (Cancelled)

14. (New) A device for forming an image on a screen comprising;

at least one coherent laser,

at least one electrically addressed spatial light modulator located in the path of light from said at least one coherent laser,

a computer for producing at least one computer generated hologram image for display on said at least one electrically addressed spatial light modulator, and

optics to direct light diffracted by said at least one electrically addressed spatial light modulator to the screen,

wherein said at least one computer generated image displayed by said at least one electrically addressed spatial light modulator causes a two dimensional image to be formed at said screen.

15. (New) A device according to claim 14 comprising a plurality of electrically addressed spatial light modulators.

16. (New) A device according to claim 14 wherein said computer is configured to produce computer generated hologram images for display on said at least one electrically addressed spatial light modulator that provides a regular array of pixels on said screen.

17. (New) A device according to claim 16 wherein the array of pixels on the screen is sub-divided into blocks and the image at the screen is formed by sequentially writing one or more blocks to the screen.

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18. (New) A device according to claim 14 comprising a plurality of coherent lasers.

19. (New) A device according to claim 17 wherein said plurality of coherent lasers comprises at least a red, blue and green laser.

20. (New) A device according to claim 14 comprising magnification optics.